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EXAMINER

MANOHARAN, VIRGINIA

ART UNIT

PAPER NUMBER

1764

DATE MAILED: 07/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/068,128

Applicant(s)

REID, JEFFREY THOMAS

Examiner

Virginia Manoharan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 April 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 19 and 20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

Applicant's election of Group I, claims 1-18 in Paper No. 6 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Applicant is requested to supply any information which applicant is considering to specifically improve as indicated at page 2, lines 11-13 of the specification i.e., "An objective of the invention is to provide a solar still that is a modification of prior known solar energy conversion apparatuses rendering them uniquely adapted for use as a still. Patents, publications, etc., that are deemed material to the proper examination of the instant application are required under 37 CFR 1.569. (Underlining above supplied).

The abstract of the disclosure is objected to because of the inclusion of legal phrasology often used in patent claims such as: "is disclosed" in line 1 and "means" in lines 2-3 and 6-7. Correction is required. See MPEP § 608.01(b).

The drawings are objected to because Fig. 1 shows reference numeral "17", whereas, the specification e.g. at page 6, line 29 recites the numeral "19".

The drawings are further objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "8" and "4"; and "20 and 21" have both been used to designate "porous" and "non-porous" respectively. Compare e.g., page 7, line 10 with page 8, line 5 of the specification. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

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Applicant should further check that no similar numbers should refer to different parts, and vice versa, i.e., different numbers referring to the same parts.

The specification has not been checked to the extent necessary to determine the presence of all possible minor errors e.g., typographical, grammar, idiomatic, syntax and etc. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

The disclosure is objected to because of the following informalities: The term "coloured" should be--colored-- as the latter is the one normally used in the U.S. See e.g. claim 2.

Claim 1 is rejected under 35 U.S.C. 112 first and second paragraphs, as the claimed invention is not described in such full, clear, concise and exact terms as to enable any person skilled in the art to make and use the same, and/ or for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The "comprising" recited e.g., in claim 1 broadens the "consists" recited in the specification. Note e.g., page 2, lines 19-27.

Claims 1-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- a. The numerous recited "means to" in the claims should be--means for--as the latter is the phraseology that is authorized by 35 USC, sixth paragraph.
- b. Claims 4-8 recite "a passive still" which are at odd with the "a solar still" of claim 1, the claim from which they depend respectively, directly or indirectly. The same holds true for the recited "an active still" in claims 9-18 ultimately depending on claim 1. A

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dependent claim incorporates every features of the claim from which it depends and cannot change or orient the limitation(s) already recited in the independent claim.

c. The inconsistent used of terminology in the claims is improper for examples only:

i. "plasma array" in claim 4, line 3 as opposed to "tube array" in claim 5, line 3; and

ii. "the at least porous tube" e.g., in claim 3, line 2 as opposed to "the porous tube" in claim 9, line 2.

d. The term "if" in claims 14 and 15 is indefinite as it fails to ascertain the claimed invention with precision.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Disclosure of Admitted Prior Art in view of Coffey et al (3,785,931) and Kaufmann (5,650,0500).

Applicant admits at page 1, lines 1-30 that "It has previously been proposed to use solar energy to heat water for domestic or other use. This is often done by simple, passive solar energy conversion apparatus wherein feed water circulates through an extended, at least partly hollow, absorber body, for example a thermally conductive, tortuous tube in close contact with a

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substantially planar thermally conductive substrate, exposed to the sun. Frequently, the absorber body is enclosed in a casing with a transparent wall, through which solar radiation impinges on the absorber body."

Applicant further admits at page 2, line 1-8 that: "It is also well known to use more technically sophisticated, active solar energy conversion apparatus to produce steam for power generation and the like. Such prior known active apparatus has comprised a parabolic trough reflector, means to mount and continuously redirect the reflector so that it tracks the sun, that is to say so that its parabolic axis remains directed towards the sun as it moves across the sky, and a relatively small diameter absorber tube axially coincident with the focal line of the parabola through which feed water is caused to flow for conversion into pressurized steam."

The features of the apparatus described above and admitted to be known by applicant differs from the claimed invention in that claim 1, for example, recites

an apparatus which is comprised in combination of a solar still comprising a hollow, porous absorber body, condenser means, of non-porous material that is substantially transparent to solar radiation, substantially enveloping the absorber body and flow control means to regulate the rate of flow of feed liquid into the absorber body.

However, it would have been obvious to one of ordinary skill in the art to replace the absorber body admitted to be known by applicant "by an absorber body made of porous material substantially enveloping the porous absorber body in a vapour (sic) condenser made of material that is substantially transparent to solar radiation." as claimed, so as to obtain the many advantages taught e.g., at column 2, lines 8-19 of the Coffey et al reference.

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Furthermore, it would have been obvious to provide a "flow control means to regulate the rate of flow of feed liquid into the absorber body in the apparatus admitted to be known by applicant as such is conventionally done in the art as taught by Kaufmann for efficient distillation. Note e.g., Fig. 1; column 3, line 2; and column 5, lines 16-25.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Frank discloses a solar thermal energy collection system.
- b. Raab discloses a desalinating system with the condensing means enveloping the evaporation means.
- c. Abbot , Swaidan and Rodgers all disclose a solar distilling apparatus.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to V. Manoharan whose telephone number is (703) 308-3844. The examiner can normally be reached on Tuesday--Friday from 7:30 a.m. to 6:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (703) 308-6824. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9311 for regular communications and (703) 308-0651 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Virginia Manoharan/dh
July 4, 2003

King
EXAMINER
PRIMARY EXAMINER
ART UNIT 121764
7/4/03